

Read This First

Getting Started

With Your Macintosh LC III

Includes setup instructions and important health-related information

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Radio and television interference

The equipment described in this manual generates, uses, and can radiate radio-frequency energy. If it is not installed and used properly—that is, in strict accordance with Apple’s instructions—it may cause interference with radio and television reception.

This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in Part 15 of FCC rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

You can determine whether your computer system is causing interference by turning it off. If the interference stops, it was probably caused by the computer or one of the peripheral devices.

If your computer system does cause interference to radio or television reception, try to correct the interference by using one or more of the following measures:

- Turn the television or radio antenna until the interference stops.
- Move the computer to one side or the other of the television or radio.
- Move the computer farther away from the television or radio.
- Plug the computer into an outlet that is on a different circuit from the television or radio. (That is, make certain the computer and the television or radio are on circuits controlled by different circuit breakers or fuses.)

If necessary, consult your authorized Apple dealer or an experienced radio/television technician for additional suggestions. You may find helpful the following booklet, prepared by the Federal Communications Commission: Interference Handbook (stock number 004-000-00345-4). This booklet is available from the U.S. Government Printing Office, Washington, DC 20402.

△ **Important:** Changes or modifications to this product not authorized by Apple Computer, Inc., could void the FCC Certification and negate your authority to operate the product.

This product was tested for FCC compliance under conditions that included the use of shielded cables and connectors between system components. It is important that you use shielded cables and connectors to reduce the possibility of causing interference to radios, television sets, and other electronic devices. For Apple peripheral devices, you can obtain the proper shielded cables from your authorized Apple dealer. For non-Apple peripheral devices, contact the manufacturer or dealer for assistance. △

Important

This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in Part 15 of FCC rules. See instructions if interference to radio or television reception is suspected.

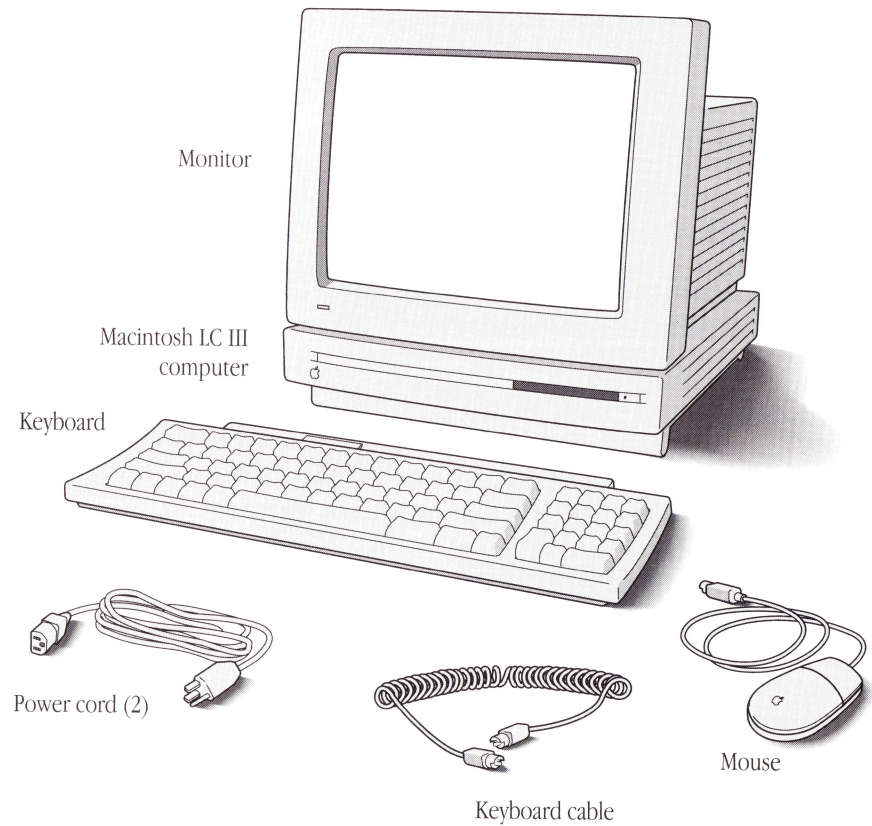
DOC Class B Compliance This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the radio interference regulations of the Canadian Department of Communications.

Observation des normes—Classe B Le présent appareil numérique n’émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Classe B prescrites dans les règlements sur le brouillage radioélectrique édictés par le Ministère des Communications du Canada.

Setting Up

Setting up your Macintosh LC III involves these steps:

- Plugging in the computer
- Connecting a monitor
- Connecting the mouse and keyboard
- Connecting a microphone
- Turning your computer on

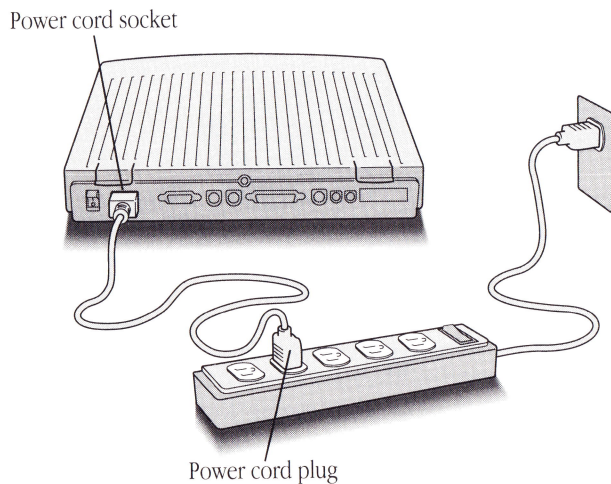


Plugging in the computer

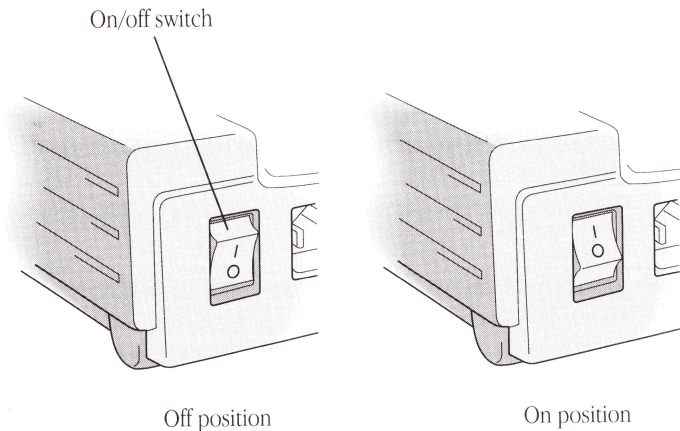
Plug in the Macintosh before connecting anything to it. The plug grounds the computer and protects it from electrical damage while you are setting up.

The Macintosh LC III comes with two identical power cords. You can use either one to plug in the computer. (You may need the other one to plug in your monitor.)

1. **Plug the socket end of the power cord into the socket on the back of the computer.**
2. **Plug the other end of the power cord into a three-hole grounded outlet or power strip.**



To protect both yourself and the computer from electrical hazards, the Macintosh LC III should remain turned off until you are finished connecting its parts. In the unlikely event that the computer starts up when you plug it in, turn the computer off. The on/off switch is on the back of the computer. Press the bottom of the switch (marked with an “O”) to turn the computer off.



▲ **Warning:** This equipment is intended to be electrically grounded. Your Macintosh LC III is equipped with a three-wire grounding plug—a plug that has a third (grounding) pin. This plug will fit only a grounded AC outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact a licensed electrician to replace the outlet with a properly grounded outlet. Do not defeat the purpose of the grounding plug! ▲

Installing an expansion card

If you purchased an expansion card for your Macintosh LC III, see “Installing Expansion Cards” for instructions on installing it. If you don’t have an expansion card, go on to the next section, “Connecting a Monitor.”

Connecting a monitor

You can connect the following monitors to the Macintosh LC III:

- Macintosh 12" RGB Display
- Macintosh 12" Monochrome Display
- AppleColor High-Resolution RGB Monitor
- Macintosh Color Display
- Macintosh Portrait Display
- Macintosh 16" Color Display
- VGA monitor with cable adapter

You may also be able to connect other monitors if you have the appropriate expansion cards or adapters for your computer. See your authorized Apple dealer for details. (If you are connecting a different monitor, see the manual that came with it.)

To connect any of the Macintosh monitors listed above, follow these steps:

1. **Decide where you want to place the monitor.**

Most monitors can be placed on top of the computer, but the Macintosh 16" Color Display is too heavy. Place heavier monitors like this one on a monitor stand or countertop.

Position the monitor to minimize glare and reflections on the screen from overhead lights and windows.

2. **Attach a power cord to the monitor. (If your monitor comes with an attached power cord, skip this step.)**

Use one of the two power cords that came with your computer.

3. **Plug in the monitor power cord.**

Make sure the monitor is turned off. Plug it into a grounded electrical outlet. If you are using a power strip, make sure it is turned on.

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4. **Attach one end of the video cable to the monitor and tighten the thumbscrews. (If your video cable is already attached, skip this step.)**

Depending on the type of monitor you have, the video cable may be built into the monitor.

5. **Attach the other end of the video cable to the video port on the back panel of the computer and tighten the thumbscrews.**

The video port is marked with the video icon:



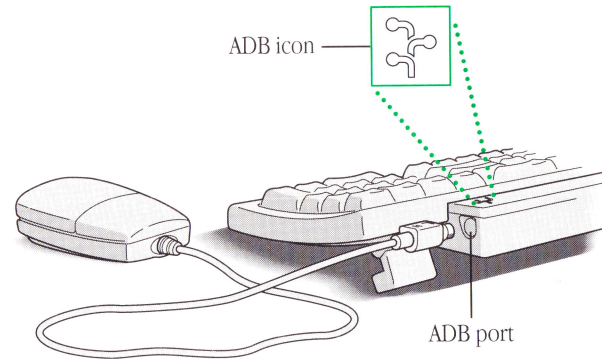
Video icon

Connecting the mouse and keyboard

Follow these steps to connect the mouse and keyboard:

1. **Plug the mouse cable into the port on the right side of the keyboard. (If you prefer to use the mouse with your left hand, plug the mouse cable into the port on the left side of the keyboard.)**

The plug and the port are both marked with an Apple Desktop Bus (ADB) icon. Align the icons before you insert the plug. (Don't force the connector into the port.) The positions of the ADB port and ADB icon on your keyboard may be different from those pictured.



2. **Plug one end of the keyboard cable—both ends are the same—into the other port on the keyboard.**

If you plugged the mouse cable in on the right, for example, plug the keyboard cable in on the left.

3. **Plug the other end of the keyboard cable into the ADB port on the back of the computer.**

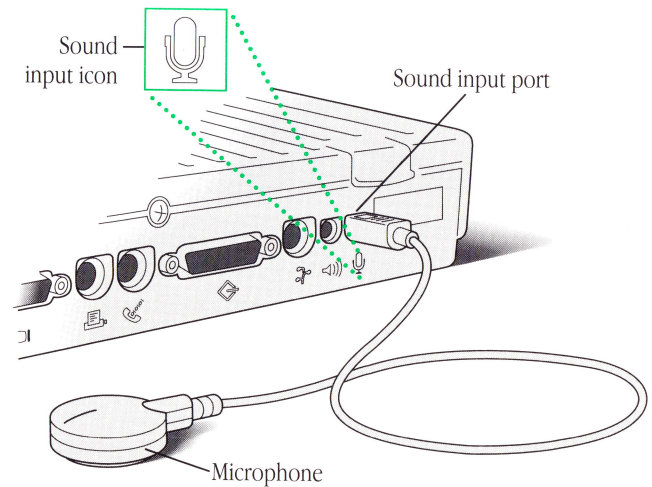
This port is also marked with the ADB icon.

As you work with your Macintosh, you may want to adjust the height of the keyboard. Your *Macintosh User's Guide* provides information on adjusting the keyboard so that you can work comfortably.

Connecting a microphone

If your Macintosh includes a microphone, you can connect it by following these steps:

1. **Plug the microphone into the sound input port on the back panel of your computer.**



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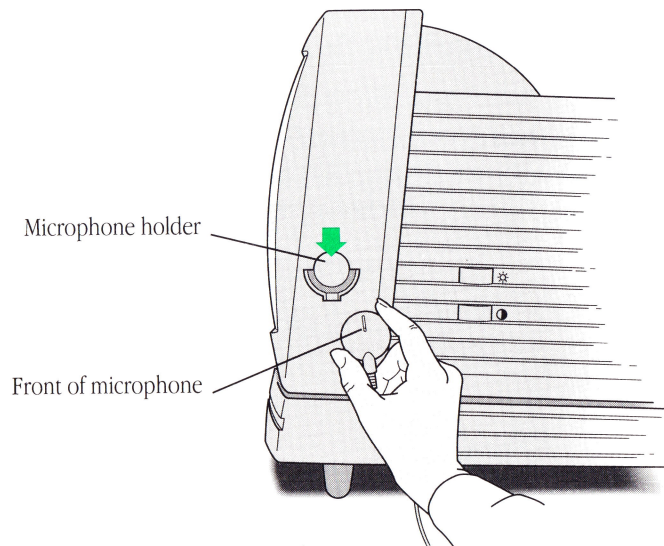
2. Decide where you want to place the microphone.

The microphone can pick up sounds within a range of several feet. You may want to attach the microphone to the side of the monitor or the top of the keyboard, or simply place it on your desk.

3. To attach the microphone to your computer, peel the paper backing off the microphone holder and press the adhesive side of the holder against a clean, flat surface.

4. Place the microphone in the holder.

The microphone has no on/off switch. Instead, the microphone is controlled by the programs you use to record sounds. (See Chapter 11 of your *Macintosh User's Guide* for more information on recording sounds.)



Turning the computer on

Turning on your computer is a two-step process—you need to turn on the monitor and the computer separately.

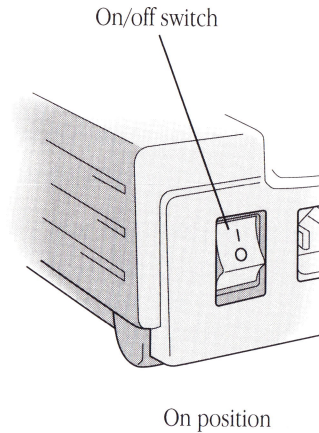
1. Turn on your monitor.

On most Apple monitors, the power switch is on the back of the monitor and is marked with this icon:



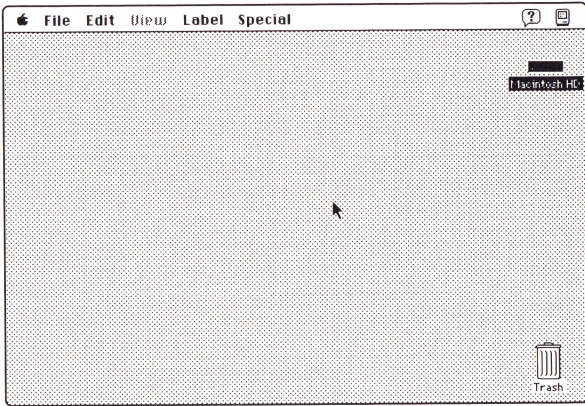
A green light at the bottom corner of the monitor indicates that it's on.

2. Turn on your computer by pressing the on/off switch at the back of the computer.



continues ►

You should hear a tone. After a few moments, you should see the Macintosh desktop with a hard disk icon at the top-right corner of your screen.



If you see a blinking question mark instead of the Macintosh desktop, you need to install system software. See Chapter 8 of the *Macintosh User's Guide* for instructions on how to install system software.

△ **Important:** When installing system software, be sure to use the *Install Me First* disk you received with your computer. Check the label of the *Install Me First* disk to make sure it is for your model of Macintosh. △

Problems starting up?

If you don't see anything on the screen, check these items to see if you can identify the problem:

- Is the computer firmly plugged into a power source? If it is plugged into a power strip, is the power strip turned on?
- Is the computer itself turned on?
- Is the keyboard cable connected correctly? (Don't disconnect the keyboard cable while your computer is on. You could damage your equipment.)
- Is the monitor power cord plugged in?
- Is the video cable attached firmly at each end?
- Is the monitor turned on?
- Is the brightness control on the monitor adjusted correctly?

Health-related information about computer use

Muscle soreness, eye fatigue, and other discomforts and injuries sometimes associated with using computers can occur from performing any number of activities. In fact, misuse of the same muscles during multiple activities can create a problem that might not otherwise exist. For example, if you engage in nonwork activities that involve repetitive stress on the wrist—such as bicycling—and also use your computer’s keyboard improperly, you may increase your likelihood of developing wrist problems. Some individuals are at greater risk of developing these problems because of their health, physiology, lifestyle, and general exposure to stress. Work organization and conditions, such as workstation setup and lighting, also play a part in your overall health and comfort. Preventing health problems is a multifaceted task that requires careful attention to the way you use your body every hour of every day.

The most common health effects associated with using a computer are musculoskeletal discomfort and eye fatigue. We’ll discuss each area of concern below. For information about electric and magnetic emissions, look in the reference material that comes with your computer.

Musculoskeletal discomfort

As with any activity that involves sitting for long periods of time, using a computer can make your muscles sore and stiff. To minimize these effects, set up your work environment carefully, using the guidelines that follow, and take frequent breaks to rest tired muscles. To make working with your computer more comfortable, allow enough space in your work area so that you can change position frequently and maintain a relaxed posture.

Another type of musculoskeletal concern is repetitive stress injuries (RSIs), also known as cumulative trauma disorders (CTDs). These problems can occur when a certain muscle or tendon is repeatedly overused and forced into an unnatural position. The exact causes of RSIs are not totally understood, but in addition to awkward posture, such factors as the amount of repetition, the force used in the activity, the individual’s physiology, workplace stress level, and lifestyle may affect the likelihood of experiencing an RSI.

RSIs did not suddenly arise when computers were invented; tennis elbow and writer's cramp, for example, are two RSIs that have been with us for a long time. Although less common than other RSIs, one serious RSI discussed more often today is a wrist problem called carpal tunnel syndrome, which may be aggravated by improper use of computer keyboards. This nerve disorder results from excessive pressure on the median nerve as it passes through the wrist to the hand.

This section offers advice on setting up your work area to enhance your comfort while you use your computer. Since the effects of repetitive movements associated with using a computer can be compounded by those of other work and leisure activities to produce or aggravate physical problems, proper use of your computer system must be considered as just one element of a healthy lifestyle.

No one, of course, can guarantee that you won't have problems, even when you follow the most expert advice on using computer equipment. You should always check with a qualified health specialist if muscle, joint, or eye problems occur.

Eye fatigue

Eye fatigue can occur whenever the eyes are focused on a nearby object for a long time. This problem occurs because the eye muscles must work harder to view an object that's closer than about 20 feet (6 meters). Improper lighting can hasten the development of eye fatigue. Although eye fatigue is annoying, there's no evidence that it leads to permanent damage.

Whenever you're engaged in an activity that involves close-up work—such as reading a magazine, doing craft work, or using a computer—be sure to have sufficient glare-free lighting and give your eyes frequent rest breaks by looking up and focusing on distant objects. Remember to have your eyes examined regularly.

To prevent discomfort and eye fatigue:

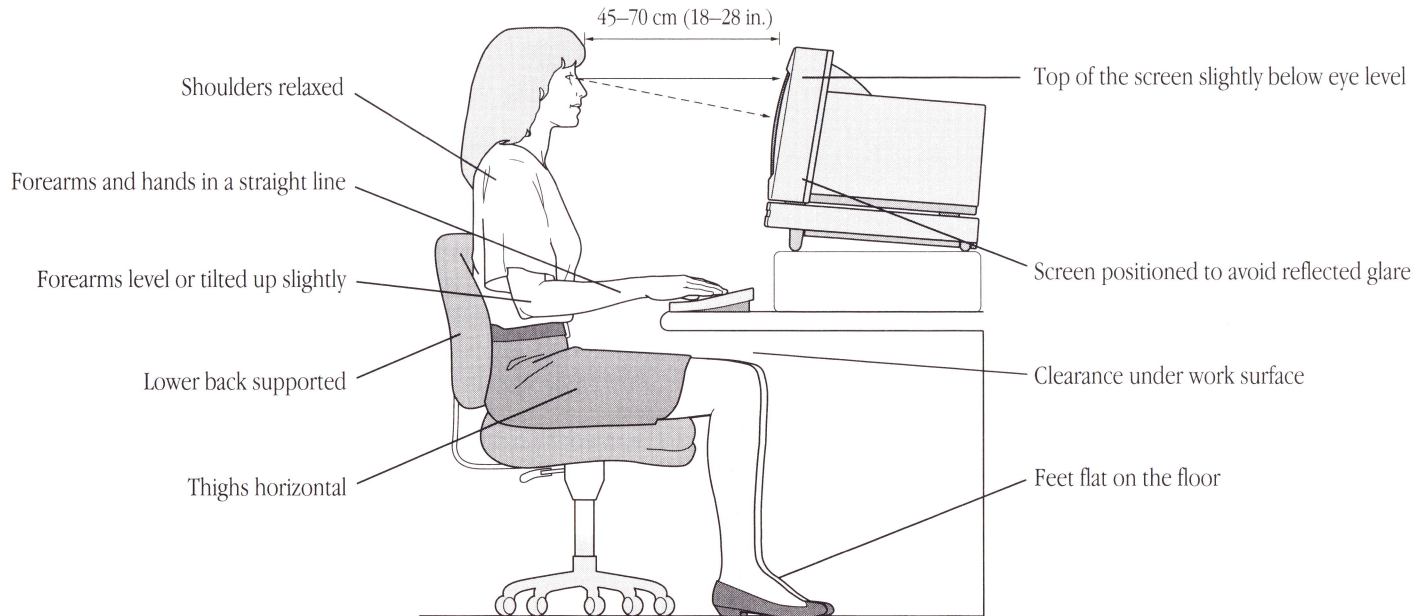
- Arrange your work space so that the furniture is properly adjusted for you and doesn't contribute to an awkward working posture.
- Take frequent short breaks to give your muscles and eyes a chance to rest.

Arranging your office

Here are some guidelines for adjusting the furniture in your office to accommodate your physical size and shape.

- An adjustable chair that provides firm, comfortable support is best. Adjust the height of the chair so your thighs are horizontal and your feet flat on the floor.

The back of the chair should support your lower back (lumbar region). Follow the manufacturer's instructions for adjusting the backrest to fit your body properly.



- When you use the computer keyboard, your shoulders should be relaxed. Your upper arm and forearm should form an approximate right angle, with your wrist and hand in roughly a straight line.

You may have to raise your chair so your forearms and hands are at the proper angle to the keyboard. If this makes it impossible to rest your feet flat on the floor, you can use a footrest with adjustable height and tilt to make up for any gap between the floor and your feet. Or you may lower the desktop to eliminate the need for a footrest. Another option is to use a desk with a keyboard tray that's lower than the regular work surface.

- If you use a mouse, position the mouse at the same height as your keyboard. Allow adequate space to use the mouse comfortably.
- Arrange the monitor so the top of the screen is slightly below your eye level when you're sitting at the keyboard. The best distance from your eyes to the screen is up to you, although most people seem to prefer 18 to 28 inches (45 to 70 cm).
- Position the monitor to minimize glare and reflections on the screen from overhead lights and windows. You may want to use a tiltable monitor stand. The stand lets you set the monitor at the best angle for viewing, helping to reduce or eliminate glare from lighting sources you can't move.

Avoiding fatigue

- Change your seated position, stand up, or stretch whenever you start to feel tired. Frequent short breaks are helpful in reducing fatigue.
- Use a light touch when typing or using a mouse, and keep your hands and fingers relaxed.
- Some computer users may develop discomfort in their hands, wrists, or arms after intensive work without breaks. If you begin to develop chronic pain or discomfort in your hands, wrists, or arms, consult a qualified health specialist.
- Allow adequate workspace so that you can use your keyboard and mouse comfortably. Place papers or other items so you can view them easily while using your computer. A document stand may make reading papers more comfortable.
- Eye muscles must work harder to focus on nearby objects. Occasionally focus your eyes on a distant object, and blink often while you work.
- Clean your screen regularly. Keeping the screen clean helps reduce unwanted reflections.

Safety instructions

For your own safety and that of your equipment, always take the following precautions. Disconnect the power plug (by pulling the plug, not the cord) if any of these conditions exists:

- The power cord or plug becomes frayed or otherwise damaged.
- You spill something into the case.
- Your Macintosh LC III is exposed to rain or any other excess moisture.
- Your computer has been dropped or the case has otherwise been damaged.
- You suspect that your computer needs service or repair.
- You want to clean the case (use only the recommended procedure described at the end of this section).

If you are having problems with your Macintosh LC III, check your user's guide for troubleshooting tips.

▲ **Warning:** If you have a problem with your computer and nothing presented in the manuals that came with the computer solves the problem, take the computer to your Apple-authorized dealer or service provider. If you attempt to repair the computer yourself, any damage you may cause to the computer will not be covered by the Limited Warranty on your computer. Contact your authorized Apple dealer or service provider for additional information about this or any other warranty question. ▲

Be sure that you always do the following:

- Keep your computer away from sources of liquids, such as wash basins, bathtubs, shower stalls, and so on.
- Protect your computer from dampness or wet weather, such as rain, snow, and so on.
- Keep these instructions handy for reference by you and others.
- Follow all instructions and warnings dealing with your system.

continues ►

- ▲ **Warning:** Electrical equipment may be hazardous if misused. Operation of this product, or similar products, must always be supervised by an adult. Do not allow children access to the interior of any electrical product, and do not permit them to handle any cables. ▲

To clean the case, do the following:

1. **Turn the computer off.**
2. **Disconnect the power plug. (Pull the plug, not the cord.)**
3. **Wipe the surfaces lightly with a clean, soft cloth dampened with water.**

What's next?

You've completed setting up your computer. Continue with one of the following steps:

- If you are new to the Macintosh, continue with the next section, "Learning the Basics," to learn more about how to use your computer.
- If you're familiar with the Macintosh, turn to "Your Computer at a Glance" for an overview of major features of your computer and instructions on how to find out more about them.
- Start your own work. Consult the *Macintosh User's Guide* if you have questions about your computer.

Learning the Basics

Your computer comes with a variety of training and reference materials. Depending on your computer experience and the way you use your computer, you may use all, some, or none of them.

Experienced Macintosh users

If you are an experienced Macintosh user, you can start right now on your own work. Consult the *Macintosh User's Guide* if you have questions as you work.

New Macintosh users

If you are a new user, begin the training provided with your Macintosh. Your training consists of two pieces:

- the Macintosh Basics tour
- the *Learning Macintosh* section of your *Macintosh User's Guide*

You should first take the training provided in the Macintosh Basics tour and then work through the *Learning Macintosh* section to learn other skills.

Finding the tour

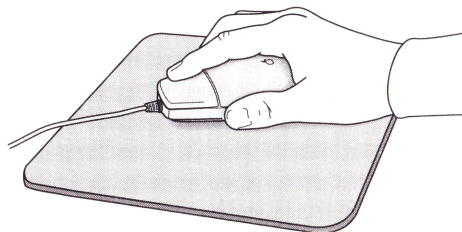
Your Macintosh Basics tour may be either on the hard disk that's inside your computer or on a floppy disk that came with your computer.

To see whether your Macintosh Basics tour is on your hard disk, follow these steps:

Make sure your computer is turned on. If the screen is dark, try adjusting the screen (as described later in this manual) until you see the Macintosh desktop on your screen

1. Use your hand to move the mouse along the table.

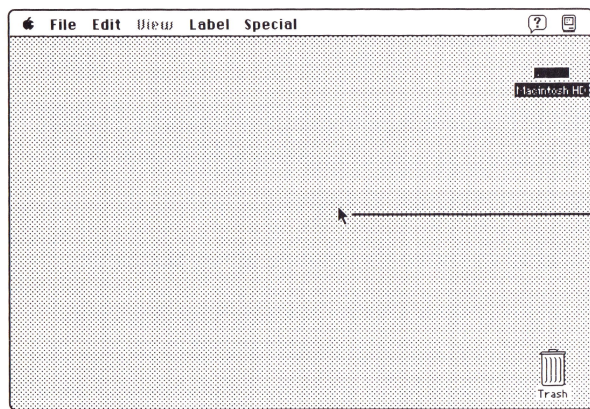
Hold the mouse as shown, cable pointing away from you. Slide it so that it stays in contact with the table. Don't press the mouse button. Watch the arrow on your screen to see if it moves when you move the mouse.



continues ►

2. Notice that the arrow on the screen moves in the same direction that you move the mouse.

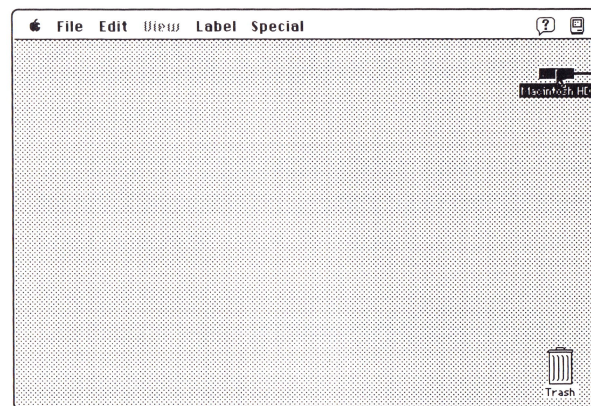
If the arrow doesn't move on the screen, make sure that the cable connecting the mouse to the keyboard is secure and that your mouse is positioned as shown in the picture. (Don't connect or disconnect the cable while your computer is on; you could damage your equipment.)



You can move the arrow by moving the mouse.

3. Use the mouse to move the arrow over the picture labeled "Macintosh HD."

Make sure the tip of the arrow is inside the rectangle and not over the text.

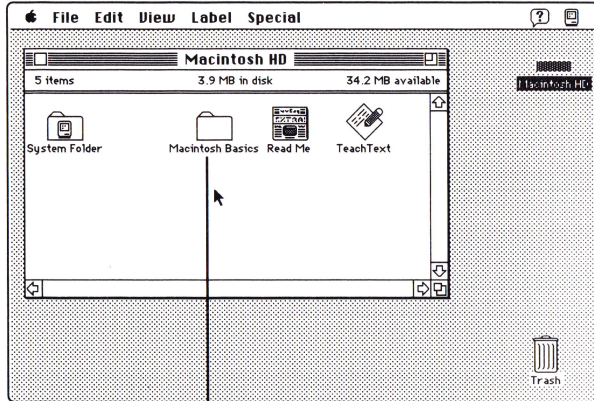


Put the tip of the arrow inside the picture.

4. Being careful not to move the mouse, click the mouse button twice in quick succession.

Now your screen should look like the picture shown in this step. If it doesn't, try steps 3 and 4 again, paying special attention to the following:

- Be sure to press the mouse button twice.
- Make sure the tip of the arrow is inside the picture and not the words beneath it.
- Try clicking twice more quickly—but be sure not to move the mouse while you're clicking.



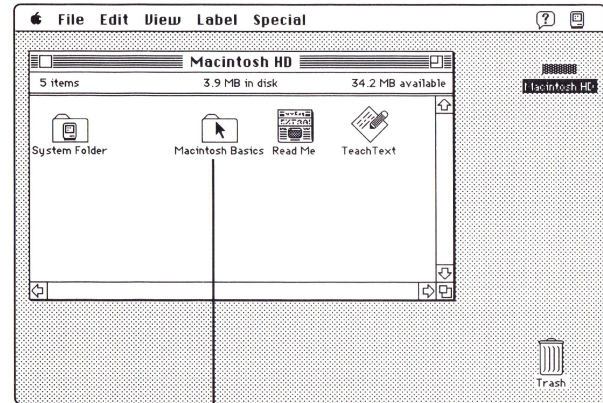
If you see this picture, your tour is on your hard disk.

The items in this illustration may not *exactly* match those on your screen. If you have a small picture of a folder, labeled “Macintosh Basics”, then your tour is on the hard disk. Continue with the following section, “Starting the Tour From the Hard Disk.”

If you don't find a folder titled “Macintosh Basics”, look through your floppy disks to find a disk titled *Macintosh Basics*. Then follow the instructions in “Starting the Tour From a Floppy Disk.”

Starting the tour from the hard disk

1. Move the mouse to place the tip of the arrow inside the picture labeled “Macintosh Basics.”



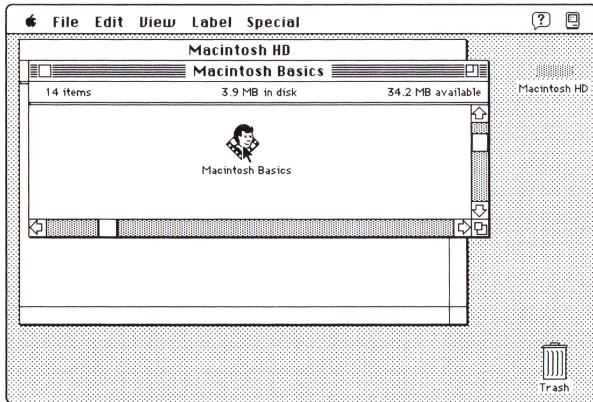
Put the tip of the arrow inside this picture.

Make sure the tip of the arrow is over the picture, not over the words “Macintosh Basics.”

continues ►

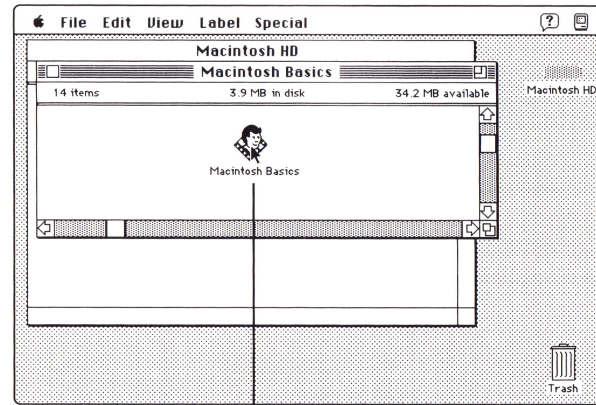
2. Being careful not to move the mouse, press the mouse button twice in quick succession.

Now your screen should look like the following illustration:



3. Move the mouse so that the arrow is over the picture of the man labeled "Macintosh Basics."

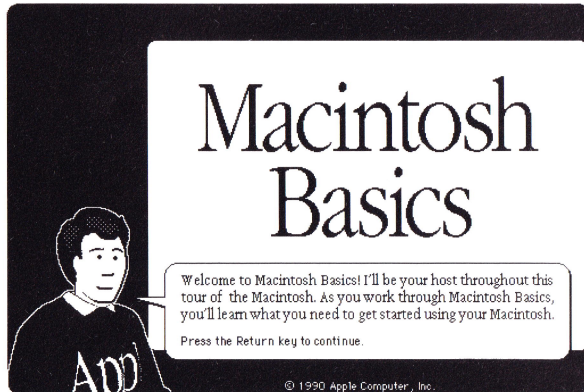
Make sure the tip of the arrow is over the picture of the man, not over the words "Macintosh Basics."



Put the tip of the arrow inside this picture.

4. Press the mouse button twice in quick succession.

The tour begins in a few moments, and you should see the following screen:

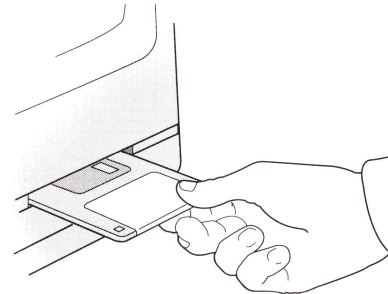


5. Follow the instructions on the screen and work through the tour.

When you finish the tour, continue with “Turning the Computer Off” later in this manual. Read the rest of the book for information that can help you use your computer safely and efficiently. Then turn to the *Learning Macintosh* section of your *Macintosh User's Guide* and begin the tutorial.

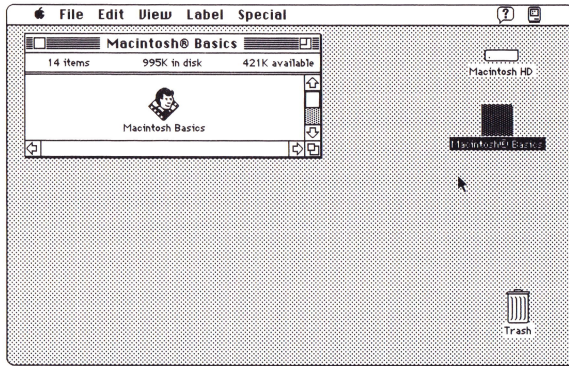
Starting the tour from a floppy disk

- 1. Insert the *Macintosh Basics* disk into the Disk Drive as shown:**



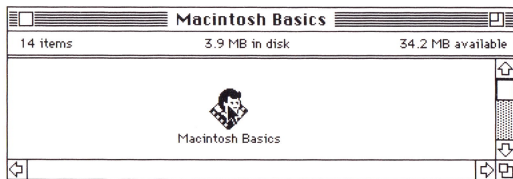
continues ►

Your screen should look like this:

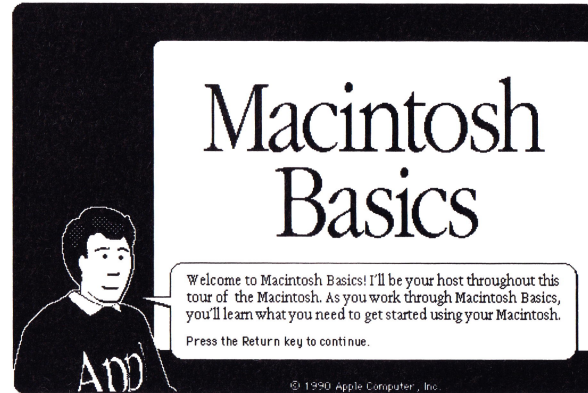


2. Use the mouse to move the arrow over the picture of the man labeled “Macintosh Basics.”

Move the mouse so that the tip of the arrow is inside the picture of the man labeled “Macintosh Basics.” Then press the mouse button twice in succession.



After the second click, you should see the following screen:



If you don't see this screen, try again, paying special attention to the following:

- Be sure to click twice.
- Make sure the tip of the arrow is inside the picture and not just over the text.
- Try clicking twice more quickly—but be sure not to move the mouse while you're clicking.

3. Now follow the instructions on the screen and work through Macintosh Basics.

When you finish the tour, continue with “Turning the Computer Off.” Read the rest of this book for information that can help you use your computer safely and efficiently. Then turn to the *Learning Macintosh* section of your *Macintosh User's Guide* and begin the tutorial.

Turning the computer off

If you plan to continue learning about how to use your Macintosh, or if you plan to continue working, don't turn off your computer yet. When you are ready to stop working, follow these steps:

- 1. Use the mouse to choose the Shut Down command from the Special menu.**

Choosing Shut Down readies the hard disk for a fast restart the next time you turn on the computer. It also prompts you to save your work, if you haven't already done so, before turning the power off.



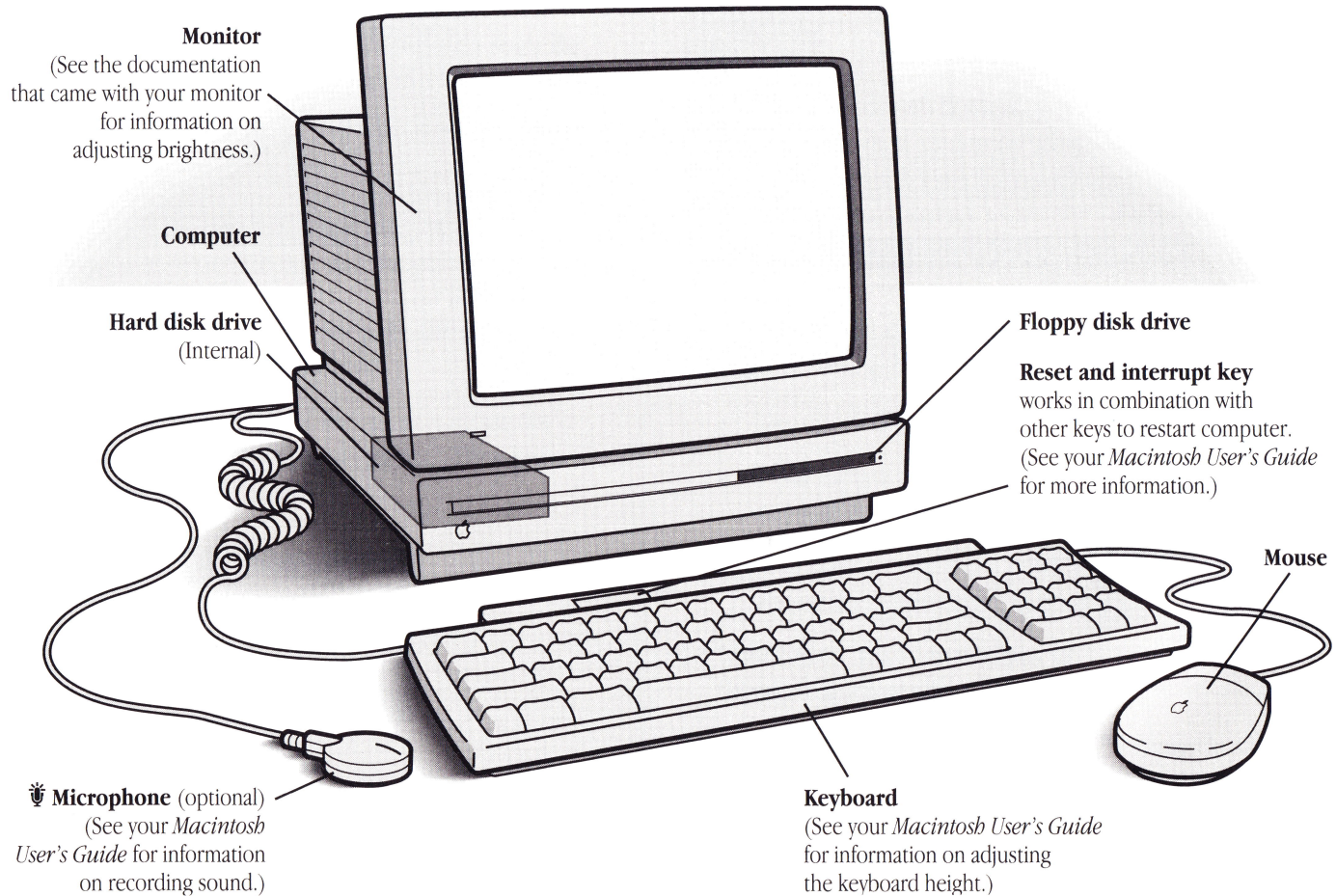
▲ **Warning:** If you switch off the computer before choosing Shut Down, you will lose any work you haven't previously saved onto a disk, and you risk permanently losing open documents. ▲

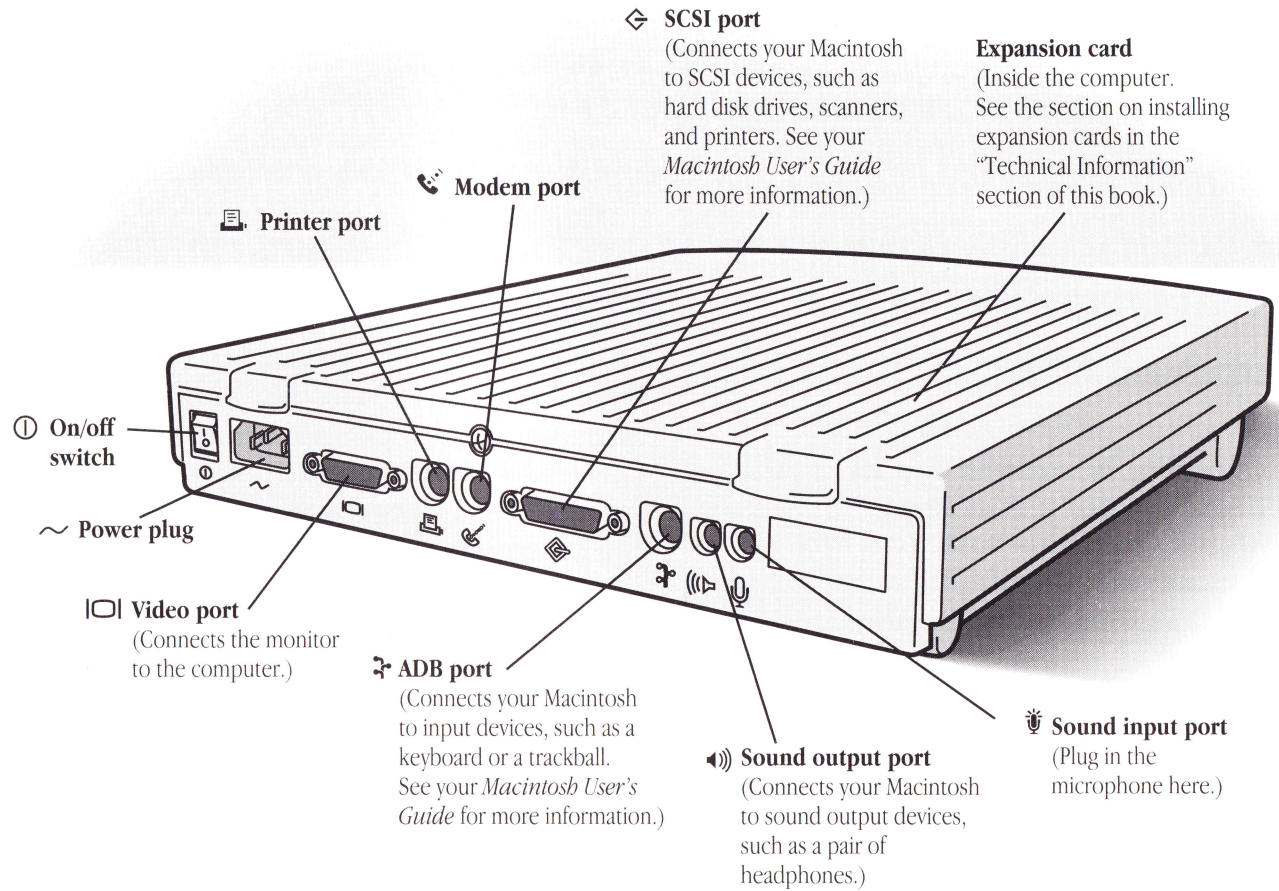
- 2. When a message appears telling you it is safe to switch off your computer, press the on/off switches on the back of the computer and monitor.**

Remember, you need to turn off both the computer and the monitor.

To turn on the computer again, just press the on/off switches on the back of the computer and on the monitor, as you've already done in setting it up.

Your Computer at a Glance





Technical Information

This section contains the following technical information:

- Installing expansion cards
- Using Apple IIe Card software with the Macintosh LC III
- Using memory efficiently
- Using a RAM disk for temporary storage
- Starting up your Macintosh from an external disk
- Technical specifications of your Macintosh LC III

Installing expansion cards

You may have purchased an expansion card that provides additional video, networking, or some other capability for your Macintosh LC III. Some expansion cards are designed so that you can install them yourself. Others can be installed only by an authorized Apple representative. Check the documentation that came with your card to see if you can install it yourself.

▲ **Warning:** To avoid damaging your computer and expansion card, do not attempt to install any expansion card in a Macintosh LC III without first checking the documentation for that card. If the documentation specifies that an authorized Apple representative must install the card (usually because the installation requires moving the main logic board), be sure to have your Apple dealer or service representative do the installation. ▲

Using Apple IIe Card software

To use the Apple IIe Card on a Macintosh LC III, you need version 2.2 of Apple IIe Card software. If you're using an earlier version, you can obtain the upgrade package from an authorized Apple reseller. In the United States, you can also call the Apple Customer Assistance Center at 800-776-2333 to request Apple IIe Card software version 2.2.

Using memory efficiently

If you often see messages that there isn't enough memory, or if you have problems opening application programs, the tips in this section will help you use your computer's memory more efficiently.

- If you're using a RAM disk, make it smaller or turn it off entirely. (See the instructions in the next section about using a RAM disk for temporary storage.) The RAM disk reduces the amount of memory available to system software and application programs.
- Make the disk cache as small as possible. (See the instructions in your *Macintosh User's Guide*.)
- Turn off system extensions you don't need. For example, you may not need the QuickTime extension if you aren't using it. If your computer isn't connected to a network, you may not need the AppleShare extension. You'll find system extensions in the Extensions folder, which is inside the System Folder. You turn an extension off by dragging its icon out of the System Folder and restarting your computer.

Using a RAM disk for temporary storage

For improved performance, you may want to set aside part of your random-access memory (RAM) to use as a temporary hard disk. Using a RAM disk improves performance because the computer can get data from a RAM disk much faster than from a hard disk or floppy disk.

You use a RAM disk exactly as you would use a hard disk or floppy disk, except that you save your work onto another disk before you shut down the computer.

To set up a RAM disk:

- 1. Choose Control Panels from the Apple (🍏) menu.**
- 2. Open the Memory control panel.**
- 3. Click On to turn on the RAM disk.**

To turn the RAM disk off, click Off.

Remember that the more RAM you allot as a RAM disk, the less you will have available for running application programs.

▲ **Warning:** If you use a RAM disk, be sure to save your work onto another disk before shutting off your computer so that you won't lose your data. ▲

Starting up your Macintosh from an external disk

To start up your Macintosh from an external hard disk, the disk must contain a System Folder, and the System Folder must contain a System Enabler for the Macintosh LC III. (A System Enabler file contains the software necessary to start up a specific model of Macintosh.)

If you are unable to start up your Macintosh from an external disk, the appropriate System Enabler file may be missing from that disk. See Chapter 8 of the *Macintosh User's Guide* for instructions on how to install system software. Be sure to use the *Install Me First* disk that came with your Macintosh LC III when you install system software on the external hard disk.

Specifications

Main unit

Processor

- MC68030, 32-bit architecture, 25 megahertz (MHz) clock frequency
- MC68882, floating-point coprocessor, 25 MHz clock frequency, optional

Memory

- 4 megabytes (MB) of random-access memory (RAM), expandable to 36 MB
- 1 MB of read-only memory (ROM)
- 512K of VRAM, expandable to 768K

Video RAM

The number of bits per pixel determines the maximum number of colors displayed on your monitor.

Bits per pixel	Number of colors
----------------	------------------

1	2
2	4
4	16
8	256
16	32,768

- **Macintosh 12" RGB Display**
512 x 384 pixels with 1, 2, 4, 8, or 16 bits per pixel
560 x 384 pixels with 1, 2, 4, 8, or 16 bits per pixel
- **AppleColor High-Resolution RGB Monitor, Macintosh Color Display, Macintosh 12" Monochrome Display**
Without VRAM expansion
640 x 480 pixels with 1, 2, 4, or 8 bits per pixel
640 x 400 pixels with 1, 2, 4, 8, or 16 bits per pixel
With VRAM expansion
640 x 480 pixels with 1, 2, 4, 8, or 16 bits per pixel
640 x 400 pixels with 1, 2, 4, 8, or 16 bits per pixel

- **Macintosh 16" Color Display**
832 x 624 pixels with 1, 2, 4, or 8 bits per pixel
- **Macintosh Portrait Display**
Without VRAM expansion
640 x 870 pixels with 1, 2, or 4 bits per pixel
With VRAM expansion
640 x 870 pixels with 1, 2, 4, or 8 bits per pixel
- **VGA monitors**
Without VRAM expansion
640 x 480 pixels with 1, 2, 4, or 8 bits per pixel
With VRAM expansion
640 x 480 pixels with 1, 2, 4, 8, or 16 bits per pixel

Disk drives

- Built-in Apple SuperDrive 1.4 MB high-density floppy disk drive
- Internal 40, 80, or 160 MB SCSI hard disk drive
- Optional external SCSI hard disk drives (several capacities available)

Sound generator

- Custom sound chip, including mono sampling generator capable of driving stereo miniature phone jack headphones or stereo equipment by sending the same output into each channel

Interfaces

- One Apple Desktop Bus port supports a keyboard, mouse, and other devices daisy-chained through a low-speed, synchronous serial bus (maximum of three chained devices)
- Two serial (RS-232/RS-422) ports, 230.4 kilobits per second maximum (up to 0.920 megabits per second if clocked externally)
- SCSI interface
- Video port supports RGB and monochrome monitors of various sizes and resolutions
- Internal expansion slot for processor-direct expansion card
- Sound output port capable of delivering monophonic sound to both channels of a stereo device
- Sound input port for mono sound input
- Internal socket for floating-point coprocessor

Power input

- Line voltage: 100–240 volts AC RMS single phase, automatically configured
- Frequency: 50–60 Hz \pm 3 Hz
- Power: 30 watts maximum, not including monitor power

Clock/calendar

- CMOS custom chip with long-life lithium battery

▲ **Warning:** If the clock begins to lose accuracy, see your authorized Apple dealer for a battery replacement. Do not attempt to replace the clock battery yourself. ▲

Monitors

- Your Macintosh LC III supports the following monitors:
 - Macintosh 12" RGB Display
 - Macintosh 12" Monochrome Display
 - AppleColor High-Resolution RGB Monitor
 - Macintosh Color Display
 - Macintosh Portrait Display
 - Macintosh 16" Color Display
 - VGA monitor with adapter
- Other Apple and non-Apple monitors may also be supported, if used in conjunction with expansion cards or adapters. See your authorized Apple dealer for details.

Keyboards

- Supports all Apple Desktop Bus keyboards

Mouse

- ADB mouse: either mechanical tracking, optical shaft, or contact encoding

Apple Desktop Bus power requirements

- Maximum power draw for all ADB devices: 200 milliamperes (mA)
- Mouse draws 80 mA
- Keyboard draws 25–80 mA (varies with the keyboard model used)
- ❖ *Note:* Up to three ADB devices can be daisy-chained to the ADB port. ❖

Apple microphone (optional)

- The microphone is an electret type, omnidirectional microphone that is powered by the computer. Microphone output voltage is 4 millivolts (mV) peak to peak at normal speaking volume.

DRAM configurations

Dynamic RAM (DRAM) in the Macintosh LC III is provided both on the logic board and in packages called Single Inline Memory Modules, or SIMMs. The SIMMs contain dynamic RAM chips on a single circuit board, with electrical “finger” contacts along one edge that plug into the SIMM socket on the computer’s logic board.

The Macintosh LC III can work with any of several 72-pin DRAM configurations, depending on the density of the RAM chips that are mounted on the SIMM. The LC III can use only 1, 2, 4, 8, 16, or 32 MB DRAM SIMMs.

For more information about SIMM compatibility, contact your authorized Apple dealer.

△ **Important:** Macintosh LC III SIMMs should be fast-paged mode 80 nanoseconds (ns) RAM access time or faster. SIMMs available for some other models of Macintosh computers will not work in the LC III. The LC III uses a 72-pin, x32 bit DRAM SIMM. △

Size and weight

Weight	Height	Width	Depth
Main unit			
4.0 kg	81 mm	310 mm	382 mm
8.8 lb.	3.2 in.	12.2 in.	15.0 in.
Mouse			
0.10 kg	33 mm	61.7 mm	107.3 mm
4 oz.	1.3 in.	2.4 in.	4.2 in.

Environment

Operating temperature

- 10° C to 40° C (50° F to 104° F)

Storage temperature

- -40° C to 47° C (-40° F to 116.6° F)

Relative humidity

- 20% to 80% (noncondensing)

Altitude

- to 3048 m (to 10,000 ft.)

The Apple Publishing System

This Apple manual was written, edited, and produced on a desktop publishing system using Apple Macintosh computers and QuarkXPress. Proof pages were created on Apple LaserWriter printers and on the QMS ColorScript 100 color printer. Final pages were output directly using the Krause LaserStar Computer-To-Plate System. Line art was created with Adobe Illustrator. Cover art was produced with Adobe Photoshop. Screen shots were created and modified with system software, Exposure, and SuperPaint.

Text type is Apple's corporate font, a condensed version of Garamond. Ornaments are ITC Zapf Dingbats® and custom symbols designed for Apple Computer.

PostScript®, the LaserWriter page-description language, was developed by Adobe Systems Incorporated.



Keep this book for future reference

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Z030-2927-A
Printed in Ireland